DOCUMENT RESUME

ED 287 268 EC 200 576

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TITLE Pretend Play in 2-Year-Olds with SELD.
PUB DATE Apr 87
NOTE 11p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Baltimore, MD, April 23-26, 1987).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Expressive Language; Infants; *Language Handicaps; Longitudinal Studies; Males; *Play; *Pretend Play; Social Development; Young Children

ABSTRACT

Twelve boys (24-30 months old) with specific expressive language delay (SELD) and with normal development in every other sphere were identified for longitudinal study. Children were videotaped while playing. Analysis using an ordinal play coding scheme revealed strikingly poor pretend play skills. They appeared deficient in either the ability or the motivation to spontaneously produce varied and complex play behaviors. Their play was also strikingly different from the play of the normal boys. Findings suggested that the boys' slow expressive language development and their immature play may reflect some delay in the spontaneous expression of socially mediated meanings. (CL)

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Pretend Play in 2-year-olds with SELD

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Paper presented at Biennial Meeting of Society for Research in Child Development, Baltimore, 1987

INTRODUCTION

As you know, our interest today is in Specific Expressive Language Delay (SELD), a disorder found in approximately 5% of 2-to-3 year-old children and characterized by normal nonverbal ability, age-adequate receptive language, and significant delay in expressive speech. The children I have been seeing are typical of children with SELD, in that they are 2-year-olds described by pediatricians and parents as normal in every way except that they do not talk.

The population of SELD 2-year-olds includes children who do not talk until 2 1/2 or 3, but who then speak in paragraphs and go on to be perfectly normal. While most of us have heard of children like this, these "late bloomers" have not been carefully studied. The population of SELD 2-year-olds also includes some other unknown proportion of children who continue to be delayed in language skills. Children who continue to manifest SELD are eventually referred to communications disorders or child guidance clinics. Studies such as that of Cantwell, Baker, and Mattison (1979) reveal that about half the children attending a community speech clinic have some psychiatric disorder. Follow-up studies indicate that a high proportion of language-delayed preschoolers go on to have learning problems in school (Silva, McGee, & Williams, 1983; Strominger & Bashir, 1977; Aram, Nation & Ekelman, 1984).

While large-scale studies have highlighted the far-ranging negative consequences of early language delay, their broad scope has precluded close focus on children with SELD, that is children with normal receptive language. While there have been a number of more intensive studies of language-delayed young children in recent years, few have concentrated on SELD children in the 24-to-30 month range. For example, Leonard and his colleagues (1982) studied 14 children of 32 months or more, most having receptive delays of 6-to-9 months. Cunningham and his colleagues (1985) recently reported data on SELD children in the 4-year range. Few studies, with the exception of Whitehurst (1985), have focused on 2-year-olds with SELD, although this is the group for whom differential predictors as to outcome would be particularly important.

The work I'll be presenting here today represents an early stage in an ongoing program of research designed to look carefully at SELD 2-year-olds. By following a group of SELD children from 2 to 3, we will obtain information about what

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proportion continues to manifest deficient language, how this subset can be distinguished at 2 from the late bloomers, and what contributing factors seem to cause slow language development in both subtypes of children.

METHOD

I'd like to talk today about a group of 12 SELD boys in the age range of 24-to-30 months, the first cohort in our longitudinal study of SELD. For purposes of comparison, we have also carried out our initial evaluation procedures with a group of 12 normally developing boys of similar age and background, recruited from subjects who had previously been seen in a local infant lab.

SELD boys were recruited by means of ads in the local newspaper and notices sent to pediatricians requesting 2-year-old children with little or no expressive language but "normal" development in other areas. About 95% of the phone calls received have been about boys. While many of the 88 calls received in a 12-month period pertained to older children or to children without marked language delay, 34 appeared from parental report to be possible SELD children in the 24-to-30 month age range. Of 34 possible subjects evaluated, 17 children were found to have SELD. The other children either had significant hearing impairment (1), were too uncooperative to be tested fully (3), had general developmental delay (5), had nearly normal language (8), or were delayed in receptive as well as expressive language (1). The 12 SELD boys in the target age range for whom we had complete data are the subjects of this report.

Each child was seen for administration of the Bayley Scales of Mental Ability and the Reynell Receptive and Expressive Language Scales. The criteria for SELD were Bayley MDI of at least 85, Reynell Receptive Age within 3 months of CA, and Reynell Expressive Age at least 6 months delayed. Each child was videotaped while playing freely with a basket of toys, first alone and later with his mother. The toy basket contained dolls, animals, trucks, utensils, blankets, dishes/bottle, wooden cubes, and some miscellaneous neutral items such as wooden sticks. In addition, the videotaped test situation afforded the child multiple opportunities to engage in pretend play with the small toys presented (e.g. animals, dolls, dishes, car, furniture).

Pretend play behavior was analyzed from videotapes using the ordinal play coding scheme found in Table 1, which we have developed based on work by McCune-Nicholich (1981), Largo and Howard 1979), Watson and Fischer (1977), and Ungerer and Sigman (1984). Each relevant play behavior was coded using this scheme and then totals for each category were computed for each child. Interrater reliability for this coding scheme was above 90% agreement for all major categories. Spontaneous pretend play during administration of the Reynell and during the 10 minute

free play situation are the data to be considered here.

The most basic level of pretend play is Functional Conventional, which involves the functional use of a toy without any person-directed scheme (pushing a truck, stirring in a cup). Functional to Self play involves the child performing a pretend scheme to himself (brushing his hair, drinking from a bottle). Other-directed pretend play comes next in the sequence, seen in feeding a doll or brushing another person's hair. Our two most advanced levels of play are Sequences and Symbolic Play. Existing typologies indicate that these two forms of play emerge later than FC, FS, and FO, but the ordinal relations within and between these categories are less well-established. We code as Sequential any uninterrupted sequence of two or more schemes at the FC, FS, or FO levels. Symbolic schemes include treating an inanimate as animate (using doll as an active agent), transforming an object in pretending (using stick as a spoon), pantomiming without a prop (drinking from imaginary cup), or playing a defined social role (pretending to be mommy or fireman).

RESULTS

OVERVIEW. We have been struck by the diversity of these SELD children, despite the fact that they were a strictly defined group similar on numerous diagnostic criteria. Some of the children were active and strong-willed, whereas others were placid and compliant. While some were relatively self-contained and not highly motivated for social communication, others were highly expressive and communicative. Although a precondition of the SELD diagnosis was normal receptive language, many of the SELD boys seemed relatively uninterested in language addressed to them, whereas some were highly attentive to the speech of others. Despite these contrasts, the SELD boys seemed to be quite consistent in their strikingly poor pretend play skills. They seemed deficient in either the ability or the motivation to spontaneously produce varied and complex play behaviors. It is this apparant deficit in pretend play skills in SELD children which I want to describe.

DEMOGRAPHIC DATA. Demographic data characterizing the SELD and normal boys studied can be seen in Table 2. The SELD boys were slightly older (27.25 vs 25.75 months). Mean birth position in the two groups was close (2.33 vs 2.08), although there were two more first-borns in the Normal group. The children were closely matched on Hollingshead SES level.

BAYLEY RESULTS. The SELD boys obtained a mean Bayley MDI score of 96.83, indicating mental ability solidly in the average range, despite failure on almost all the expressive language items above the 20 month level. In order to obtain a reasonable comparison of the cognitive abilities of the SELD and Normal boys which was unconfounded by the obvious differences in their expressive language, modified MDI scores were calculated for both groups by omitting the five expressive language items above

the 22 month level. This resulted in MDI scores of 92.83 for the SELD boys and 107.83 for the Normal boys. This mean difference was statistically significant, as was the significantly greater standard deviation in MDI score for the Normal boys.

LANGUAGE RESULTS. The SELD boys all had age-appropriate receptive language skills, as seen by their mean Reynell Receptive Language standard score of .29 (mean receptive age 1.5 months above age level). Thus, the SELD boys were normal in their ability to respond to verbal labels, two-part commands, and action/function descriptions. The Normal boys had above average receptive language, as indicated by a mean standard score of 1.27 and a mean difference of 6.2 above CA.

The expressive language criterion for SELD was at least 6 months delay in speech. Mean Expressive Language standard score for the SELD boys was 1.68, with expressive language showing a lag of from 6 to 12 months -- a very substantial delay in the 24-to-30 month period. In contrast, the Normal boys had a mean Expressive Language standard score of .31, indicating scores about at age level. SELD boys had a reported vocabulary of 37.5 words, compared to a mean reported vocabulary of 230.67 for the Normals. All the Normal boys had some word combinations, whereas only two of the SELD boys used any combinations, and these did so only infrequently.

While follow-up language status is not the focus of this report, it is interesting to note that these SELD boys appear to be quite an impaired group. None of the 12 has so far followed the "late bloomer" pattern of suddenly conversing in mature sentences. Almost all have made some progress, but for many it has consisted of acquiring a few new words or some two word combinations over a period of months. Eleven of the 12 SELD boys have been seen for follow-up thus far. Seven of the 30-to-36 month old children are still showing significant expressive language delay and six these have either been referred for speech-language therapy or are already receiving such intervention. The other four close to age level on some expressive measures, but they are not fully age-adequate in their syntactic and morphological development. The one boy not yet seen for follow-up was delayed at the time of our evaluation for his parents to decide to enroll him therapy. They report that he is making some progress, but is still very delayed in his speech.

PLAY RESULTS. Results of the play analyses appear in Table 2. As can be seen, the SELD and Normal boys did not differ in the simpler, less advanced forms of play -- FC and FS. However, there were highly significant differences in the higher forms of play in both the free play and the testing contexts. SELD boys exhibited significantly less Functional to Other play during the free play situation, and their level of FO play during the Reynell just missed being significantly lower than that of the Normals. Significant differences in Sequences and Symbolic Play were found in both the free play and testing contexts.

Virtually all of the SELD boys showed some simple functional play using pretend schemes, particularly schemes such as pushing the truck or loading blocks in the truck. However, the SELD boys manifested very few higher level play behaviors, behaviors which work by McCune-Nicholich, Ungerer and Sigman, Largo and Howard, and Watson and Fisher indicate are to be expected at 24-to-30 months. Only three SELD boys showed more than one Functional to Other behavior during free play and five did not even produce one FO behavior. Similarly, only five of the 12 SELD boys produced more than one FO behavior during the Reynell testing. Play sequences were relatively rare in the SELD group, with only two boys producing more than one sequence in free play and six boys producing more than one play sequence during the Reynell. Symbolic substitution, pantomime, and animation of figures also occurred very infrequently in the SELD boys, with only two of the 12 engaging in more than one symbolic play behavior.

Not only was the play of the SELD boys quite simple, fragmented, and unelaborated relative to what is known about pretend play from other studies in the literature, it was also strikingly different from the play of the Normal boys we studied. While not all the Normal boys became engaged in elaborated and complex pretend play, many of them displayed sustained and sophisticated pretending. Ten of the 12 engaged in at least two FO behaviors during both the Reynell and the free play. Nine out of 12 engaged in two or more sequences during free play and 11 out of 12 produced two or more sequences during the Reynell. Seven Normal boys produced at least two symbolic behaviors.

Analysis of the different schemes or play themes produced by the children indicated that the SELD boys not only produced less high level play, but they also were less varied in their play. Discrete play schemes such as giving the doll a bottle, putting a little man in the cab of the truck, and giving an animal a ride in the back of the truck were delineated. When total number of different play schemes was averaged across children in each group, it emerged that SELD boys engaged in a mean of 3.5 different schemes, as opposed to 6.4 for the Normals. Both groups engaged in a lot of truck play, but the Normals were much more likely to use a doll as a driver or give an animal a ride than the SELD boys. Although both groups engaged in considerable feeding play, only the Normals were likely to feed a doll or another person in the room. There were 16 incidents of bedtime and grooming play in the Normals, but only one such incident for the SELD boys.

Qualitative analysis of the Sequences produced by the children also revealed some major group differences. To illustrate with data from the Reynell testing, Normal boys tended to produce longer sequences, with 22% of sequences consisting of more than three schemes. By contrast, none of the SELD boys produced sequences of more than three schemes. Normal boys' sequences tended to involve higher levels of play, as seen

by the fact that 49% of schemes in sequences were FO, as opposed to 28% FO schemes in sequences of the SELD boys.

To summarize, SELD boys appeared to have relatively scattered and impoverished pretend play. Some of them seemed to be like Wolf and Grollman's (1982) "patterners," in that they became most engrossed when they were lining up cubes or arranging them into rows in back of the truck. Other SELD boys explored the toys in a desultory way, but did not become very involved in any kind of play. The relative rarity of Functional to Other play suggests that the SELD boys had an impoverishment of socially-directed play, whether to the dolls or to other people.

The SELD children often failed to utilize nearby toys which were highly relevant to their ongoing activity (e.g. ignoring the baby doll nearby when holding the baby bottle). This suggested that they lacked articulated and clear representational schemas for common play scripts, or else that the toys at hand were not sufficient to trigger the spontaneous enactment of such scripts without modeling and prompting by an adult. In contrast, many of the Normal boys engaged in elaborate play scenes, e.g. making a bed with a quilt and a pillow, putting the bear and bunny to bed on the pillow, and then feeding them with a bottle; stirring on plate with a spoon and stick and then feeding self, mother, examiner, and camera operator in extended sequence.

It was very uncommon for the SELD boys to engage in decontextualized pretending using transformed objects or imagined props (e.g., using stick as a spoon, using stick as a gas hose for the truck). This kind of symbolic substitution was seen in about half the Normals (using a cube as food for an animal; pantomiming taking soap for hair washing after brushing hair; looking for something to use as a tool to "fix" the truck; "filling" the baby bottle by holding it near the radiator screen.)

CONCLUSION

In conclusion, we were struck by the deficits in spontaneous pretend play exhibited by these SELD boys. Their good receptive language skills suggest that these children are not lacking in a capacity for symbolic representation. However, their slow expressive language development and their immature play may both reflect some delay in the spontaneous expression of socially mediated meanings. While these children seem well aware of routines and relationships in their environment and they indicate this knowledge by responding to verbal commands or behaving in organized and goal-directed ways in their home environments, they seem relatively undeveloped in the spontaneous communication of this knowledge. Pleasure in referring to their knowledge for the sake of interaction with another person seems to be somewhat lacking.

The results which I have just described raise some intriguing questions about children with SELD. Our findings suggest that these children may have other stylistic differences or deficits which are congruent with their expressive language delay, but distinct from it by virtue of being in the domain of symbolic play. Thus, we suspect that SELD children are distinguishable from their normally developing peers in other respects besides their expressive language. We plan to explore these differences in more detail in our ongoing work.

There are a number of possible limitations to the work reported here. Clearly, our sample size is still small. We will not know if deficits in pretend play are characteristic of SELD 2-year-olds in general until we have seen a larger number of children. A second limitation with the present study is the unanticipated difference in Bayley MDI score between the SELD and Normal boys, even when expressive language items above 22 months were omitted. Although differences in MDI within the normal range of 90 to 110 have not previously been found to be associated with differences in pretend play, it is possible that there was a connection between these factors in the present study. However, the fact that the SELD children were somewhat older would presumably mitigate against this possible confounding. In any event, the larger sample of both SELD and Normal boys available in future work will enable us to control more strictly for MDI and receptive language level. Finally, we recognize the possibility that the obtained differences between SELD and Normal boys may be based in performance rather than underlying competence. Therefore, in our future work, we plan to include instruction and modeling play conditions in our assessment of pretend play skills in SELD and Normal children.

In conclusion, referential speech and pretend play both involve the child actively assimilating objects and events in the world into his representational schemes and then conveying these relationships in some publicly recognizable form. The meanings of words and the scripts of daily life are socially mediated contents which seem undeveloped in the SELD children we have seen, at least insofar as they are expressed in a spontaneous and self-initiated fashion. Our data thus far make us speculate that many SELD children may lack a rich appreciation for the social communicative and symbolic value of words and representational toys and that this may contribute to their slow expressive language development and their delayed pretend play skills.

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Table 1

PRETEND PLAY CODE

FC: FUNCTIONAL CONVENTIONAL--child shows proper, conventional use of object (pouring, spooning, places cup on saucer, pushes truck, stands up animal)

FS: FUNCTIONAL TO SELF--child uses pretend scheme to self (brushes own hair, feeds self with spoon, lies down on small pillow, drinks from cup)

FO: FUNCTIONAL TO OTHER--child performs pretend scheme on/with doll or other person (brushes doll's hair, hugs toy bunny, feeds doll, covers doll with blanket, hops toy dog, gives toy horse ride in truck)

SEQUENTIAL: Uninterrupted sequence of two or more pretend schemes at FC, FS, or FO level.
SEQ 1: child performs sequence of two or more different actions which show understanding of object use; one of the actions may, but need not, involve a recipient "other" (pouring into cup and feeding doll: FC, FO; pouring into cup and stirring in cup: FC, FC).
SEQ 2: child uses two different pretend schemes to a single recipient, either self or other (brushes doll's hair and feeds doll with bottle; feeds self with spoon and drinks from cup).
SEQ 3: child applies the same pretend scheme to two or more recipients (brushes own hair, brushes mother's hair; feeds doll 1 and feeds doll 2).
SEQ 4: child uses two or more pretend schemes to two or more recipients (feeds and brushes doll 1, then feeds and brushes doll 2).

SYMBOLISM:
SYM A: child substitutes non-conventional object for conventional one in pretend scheme (uses popsicle stick as spoon; uses shell as cup).
SYM B: child performs pretend scheme with absent object (pretends to pour from imaginary teapot).
SYM C: child treats doll or animal as animate, independent agent (makes two animals talk to each other, makes doll feed bear).
SYM D: child explicitly assumes role of another ("I mommy")

Table 2

MEAN SCORES BY GROUP

	SELD	NORMAL
Age	27.25	25.75
Birth position	2.33	2.08
Hollingshead SES	1.33	1.25
Bayley MDI	96.83	124.83**
Modified Bayley MDI	92.83	107.83**
Receptive language z-score	.29	1.27**
Expressive language z-score	-1.68	.31**
Reported vocabulary	37	231**
PLAY VARIABLES		
Reynell FC	6.50	9.67
Reynell FS	.58	1.33
Reynell FO	1.75	6.67
Reynell SEQ	1.50	3.25*
Reynell SYM	.50	3.75*
Free play FC	4.67	6.50
Free play FS	.50	1.08
Free play FO	1.08	4.17**
Free play SEQ	.67	2.92**
Free play SYM	.50	2.67*

* significant difference at $p < .05$ level by t-test.
** significant difference at $p < .01$ level by t-test.